

Claims

WHAT IS CLAIMED IS:

- 5 1. A computer system for operating a plurality of display devices, comprising:
- 10 at least a first video adapter with a first video BIOS and video driver, and a second video adapter with a second video BIOS;
- a processing unit;
- a system memory operatively coupled to the processing unit;
- 15 a read only memory operatively coupled to the processing unit, the read only memory storing a system BIOS that, when read by the processing unit, causes the processing unit to identify one of the first and second video adapters as a primary video adapter and the other of the first and second video adapters as a secondary video adapter;
- 20 the processing unit, as directed by the system BIOS, executing a POST (power on self test) during which the system BIOS stores the first video BIOS in a first memory area in a system memory of the computer system, and copies the first video BIOS to a second memory area in the system memory, when the first video adapter is the secondary video adapter and the second video adapter is the primary video adapter, thereafter the second video BIOS being stored in the first memory area, thereby overwriting the first video BIOS in the first memory area; and
- a video driver for the first video adapter, the video driver copying the first video BIOS from the second memory area to a third memory area in the system memory;
- 25 wherein the computer system uses at least one of the first and second video adapters to display information on at least one display device connected to the computer.
- 30 2. The computer system according to claim 1, wherein the computer system further comprises a motherboard, the motherboard having stored thereon the first video BIOS and the first video adapter.

3. The computer system according to claim 2, wherein the computer system further comprises a motherboard, the motherboard having stored thereon the first video BIOS and the first video adapter, wherein the computer system further comprises an add-on board, the add-on board having stored thereon the second video BIOS, wherein the first video BIOS is stored on the motherboard in compressed form, and wherein the first video BIOS is stored in the first memory area in decompressed form.
4. The computer system according to claim 1, wherein the computer system further comprises an add-on board, the add-on board having stored thereon the second video BIOS.
5. The computer system according to claim 1, wherein the second video BIOS is stored in uncompressed form.
6. The computer system according to claim 1, wherein the computer system comprises a portable computer having the first video adapter and a docking station for receiving the portable computer, the docking station having the second video adapter.
7. The computer system according to claim 6, wherein the portable computer has a first display device, and wherein a second display device is operatively connected to the docking station.
8. The computer system according to claim 7, wherein the first video adapter provides display data to the first video device, and wherein the second video adapter provides display data to the second video device.

9. The computer system according to claim 1, wherein the computer system further comprises a frame buffer operatively connected to the processing unit, and wherein the second memory is the frame buffer.

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10. A computer system for operating a plurality of display devices, comprising:
- a motherboard, the motherboard having a first video adapter with a first video BIOS and a video driver, the first video BIOS being stored on the motherboard in compressed form;
 - 5 an add-on board, the add-on board having a second video adapter with a second video BIOS, the first video BIOS being stored in the first memory area in decompressed form;
 - a system memory having a plurality of memory areas;
 - the motherboard of the computer system, having stored thereon a system BIOS that, during a POST of the computer system, identifies the second video adapter as a primary video adapter and the first video adapters as a secondary video adapter;
 - 10 the system BIOS structured to decompress the first video BIOS and storing the decompressed first video BIOS in a first memory area in a system memory of the computer, to copy the decompressed first video BIOS to a second memory area in the system memory, and thereafter to store the second video BIOS in the first memory area, thereby overwriting the first video BIOS in the first memory area;
 - 15 the video driver structured to copy the first video BIOS from the second memory area to a third memory area in the system memory;
 - 20 wherein the computer system uses at least one of the first and second video adapters to display information on at least one display device connected to the computer.
- 25 11. The computer system according to claim 10, wherein the computer system comprises a portable computer containing the motherboard with the first video adapter and a docking station for receiving the portable computer, the docking station containing the add-on board with the second video adapter.

12. The computer system according to claim 11, wherein the portable computer has connected thereto the first display device, and wherein the second display device is operatively connected to the docking station.
- 5 13. The computer system according to claim 10, wherein the first video adapter provides display data to at least the first video device, and wherein the second video adapter provides display data to at least the second video device.

14. A method for posting a computer system having at least a first video adapter with a first video BIOS and a second video adapter with a second video BIOS, comprising the steps of:

initializing a system BIOS of the computer system;

- 5 identifying the second video adapter as a primary video adapter and the first video adapter as a secondary video adapter;

posting the first video BIOS;

storing the first video BIOS in a first memory area in a system memory of the computer;

- 10 copying the first video BIOS to a memory area;

posting the second video BIOS;

storing the second video BIOS in the first memory area, thereby overwriting the first video BIOS in the first memory area;

loading a video driver for the first video adapter;

- 15 copying the first video BIOS from the video frame buffer area to a further memory area in the system memory;

using at least one of the first and second video adapters to display information on at least one display device connected to the computer.

- 20 15. The method according to claim 14, wherein the computer system comprises a motherboard, the motherboard having stored thereon in compressed form the first video BIOS.

- 25 16. The method according to claim 15, wherein the system BIOS, during POST, decompresses first video BIOS, and stores the decompressed first video BIOS in the first memory area of the system memory.

- 30 17. The method according to claim 14, wherein the computer system has an add-on board, the add-on board having stored thereon the second video BIOS in uncompressed form.

18. The method according to claim 14, wherein the computer system comprises a portable computer having the first video adapter and a docking station for receiving the portable computer, the docking station having the second video adapter.
19. The computer system according to claim 18, wherein the portable computer has a first display device, and wherein at least a second display device is operatively connected to the docking station, the first video adapter providing display data to the first video device, and the second video adapter providing display data to the second video device.
20. The method according to claim 14, wherein the computer system has a plurality of video adapters and respectively associated display devices.